First description of the nest of Yellow Flycatcher *Erythrocercus holochlorus*

The Yellow Flycatcher *Erythrocercus holochlorus* is restricted to lowland forest, moist thickets, and riverine forest on the coastal plain of East Africa from sea level to 500 m. It occurs in southern Somalia and Kenya, inland to the lower Tana River, and Tanzania, inland to the foothills of the Eastern Arc Mountains (Ash & Miskell 1983, Short *et al.* 1990). Brown & Britton (1980) listed Yellow Flycatcher under the category of "species whose nests were undescribed up until June 1976." Since then, only one record, that of fledglings being fed, has been submitted to the East Africa Natural History Society nest record scheme (L. Bennun, *in litt.*). No additional breeding records or published descriptions of the nest, eggs, or nestlings of this species are known to us. In this paper we describe two nests of Yellow Flycatcher recently found in coastal forests in Kenya and Tanzania.

In December 1989 JFMH, LLS, and JW discovered a nest occupied by Yellow Flycatchers near the nature reserve road in Sokoke Forest (3°20S, 39°50E), Kilifi District, Coast Province, Kenya. Periodic observations were made on the behaviour of adults and nestlings at the nest until fledging occurred. Another nest, still under construction, was found by DCM in December 1990 in the Pugu Hills (6°53S, 39°05E), Kisarawe District, Coastal Region, Tanzania. No follow-up observations were made at this site.

The Sokoke nest was found on 12 December 1989 when calls of two Yellow Flycatchers led to its discovery in dense foliage near the top of an understory tree. Calls from within indicated the presence of young. On the following day another visit was made at 10:58 hrs. One bird was observed singing repeatedly as the other approached the nest with food and entered through an opening in the side. Further feedings were observed at 11:25 hrs and 11:34 hrs, each time by one bird (possibly the female) with the other (possible the male) singing nearby. Three feathered young were observed through the entrance. They were olive-green above, lighter greenish below, with a pale yellow bill and eye-ring, and pink gape. On 15 December the young were still in the nest. By the next visit, 18 December, the young had fledged, and the nest was collected by Dickson Chepus (National Museums of Kenya nest No. 996).

The nest tree was a 5-m-tall *Drypetes reticulata*. It stood in dense understory in an old tree-fall gap. The nest was of the hanging ball type, 4.5 m above the ground and 0.5 m below the subcanopy and an overhanging branch. It was made of dead leaves from *Drypetes reticulata* and at least two other tree species, and was bound together and secured to twigs of the supporting tree with spider webs. Surrounding green foliage was incorporated into the outside layer. Webs were not bound around the outside of the leaf blades thereby preserving the camouflage effect. The nest "cup," about 40 mm across, was clean and free of faecal matter. It was constructed of spider webs and plant down with a side entrance. Dimensions were 105 x 55 mm (height and width). On one side near the opening, two leaves had daubs of mud in a hexagonal pattern, most probably formed by mud-dauber wasps (*Synagris* sp.). The nest was superficially similar to nests of common, arboreal forest ants, *Oecophylla* sp., (Formacinae). Bates (1911) described a nest of the closely related Chestnut-capped Flycatcher, *E. mcallii,* in which dead leaves hanging from two small twigs were incorporated directly into the outside structure of the nest. Loose dead leaves used in the Sokoke nest appeared to be too large for the birds to carry. However, the presence of unattached dead leaves from at least three species of tree provides evidence to the contrary.

While walking along a trail in the Pugu forest on 15 December 1990, DCM was attracted to a persistent twittering call. The call was traced to a group of three Yellow Flycatchers foraging on the edge of a tree-fall gap. After a few minutes two birds were seen entering an area of dense foliage, one carrying white material in its bill and re-appearing without it. Closer investigation revealed that the birds were working on a partially completed nest. Observations continued for about 30 min, during which two birds returned to the nest repeatedly. Each time one of the birds was carrying what appeared to be spider web. This bird entered the nest immediately after landing and remained inside from 30 s to 2 min. The accompanying bird remained close, giving a constant excited twittering call, moving actively about in the foliage, and probing around the outside of the nest. After the bird in the nest emerged, they both flew across the gap to join the third bird. They would then forage together for a few minutes before resuming building activity.

The nest was in a tree at the gap edge, 6 m above the ground and 2 m from the canopy. It was an untidy ball of green leaves bound together from within with spider webs, and with a side entrance facing the gap. Leaf edges on the outside of the nest were not bound together, making the nest difficult to distinguish from surrounding foliage. It would have been nearly impossible to locate were it not for the conspicuous behaviour and calls of the birds. The birds were not seen carrying leaves, green or dead, to the nest. They appeared to be incorporating living foliage from the surrounding leaf cluster directly into the nest walls. It was not possible to see whether other materials, such as dead leaves or plant down, were used in the nest construction. Unfortunately, no follow-up observations could be made to monitor building progress and outcome.

Three birds, all apparently adults, were seen together close to the nest, although only two were observed working on it at any one time. It was not possible to determine whether it was the same two birds because of the difficulty of keeping track of individuals during animated and vocal foraging bouts.

The genus *Erythrocercus* is endemic to Africa and contains three species, Yellow, Chestnut-capped, and Livingstone's *E. livingstonii*. All are gregarious and forage in pairs or small family parties which frequently join mixed-species flocks. They have similar habits, moving incessantly and vocalizing frequently while foraging (Bates 1911, Vincent 1935). Yellow and Chestnut-capped are forest birds whereas Livingstone's is found mostly in gallery forest and evergreen thickets (Vincent 1935, Maclean 1985). The nests of Yellow Flycatcher described in this paper were similar to those of both Livingstone's and Chestnut-capped Flycatchers (Bates 1911, Benson 1944, Chapin 1953, Maclean 1985). Benson (1944) observed that the hanging ball-type nest is unique to *Erythrocercus* within the Muscicapidae. There have been some doubts about the affinities of *Erythrocercus*. White (1963) placed it in the tribe Monarchini but Hall & Moreau (1970) stated that it did not "fall readily" into either Monarchini or Muscicapini. Other authors have elevated Monarchini to familial status, and it is within Monarchidae that *Erythrocercus* is currently placed (Short *et al.* 1990).

All records of breeding activity in *Erythrocercus* have been from the wet season (Benson *et al.* 1971, Benson & Benson 1977, Chapin 1953). One of the few recorded nests of Livingstone's Flycatcher was found near a wasp nest (Benson 1944). This nest, unoccupied when found, also contained the nest of a mud-daubing wasp. Nesting in association with aggressive social insects has been reported for a number of bird species in Africa and may provide some protection from potential nest predators (MacLaren 1950, Moreau 1942). Because of poorly studied habits in *Erythrocercus* and

the small number of nests found, many unanswered questions remain about their breeding biology. For example: are there are helpers at the nest? Do they build nests preferentially in association with wasp or arboreal ant nests? What is the incubation period?

The eggs of Yellow Flycatcher and possibly those of Chestnut-capped Flycatcher (see Chapin 1953, Serle 1977) remain undescribed.

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Grosbeak Weaver *Amblyospiza albifrons* feeding on a frog

On 12 June 1984 in Dar es Salaam I observed a female Grosbeak Weaver *Amblyospiza albifrons* take and eat a frog. The weaver was perched high on a tall sedge growing from a recently filled rain-fed pond. The sun had set and the sound of frogs filled the air. The bird moved sideways down the sedge stem some 50 cm until almost at water level. The small frog—not much larger than the bird's head—was taken and carried in the bill back towards the top of the stem. The bird remained on the stem, holding the frog in its left foot, and deliberately tore it into small pieces which it swallowed whole.

Grosbeak Weavers were breeding nearby and no doubt the relatively large and protein-rich food source was most valuable. McLachlan & Liversidge (1968) mention insects "and even mice in captivity" as well as berries and seeds in the diet of the species. However, Maclean (1985) mentions only insects, fruit and seeds, the earlier reference to mice being omitted. H.T. Laycock (pers. comm.), who has studied this species for many years in southern Africa, believes the reference to mice is erroneous.

It is surprising that such a presumably valuable and abundant food source is not taken more often. Perhaps observations at dusk (when frogs are most active) have been limited.

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